DETAILED ACTION

1.   This communication is in respond to applicant's submission filed on May 31, 2011. Claims 18-22, 24-28 and 34 are pending.

2.   This communication is to replace the Non-Final office action mailed on September 14, 2011.

Continued Examination Under 37 CFR 1.114

3.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/31/2011 has been entered.

Examiner's Note

4.   Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Response to Arguments

5.   Applicant's following arguments filed 05/10/2011 have been fully considered but they are not persuasive.

Applicant's Arguments:

First, McHenry's "user access frequencies" do not constitute the claimed "interest value," because the "user access frequencies" are determined "for each category based on statistical data ... associated with the respective category," as recited by amended claim 18. Indeed, McHenry's "user access frequencies" have nothing to do with each of its "plurality of content groups." Accordingly, since the "user access frequencies" are not associated with respective "content groups," McHenry also fails to teach or suggest "identifying at least one category, from said predefined categories, when the distributed contents associated with the category have an interest value that exceeds the interest threshold," as recited by claim 18. (Applicant's response filed on 05/10/2011, page 11)

Examiner's Response:

The Examiner respectfully disagrees. "user access frequencies" indicate how often user access particular contents and therefore are clearly interest values; further, it is clearly statistic data; further more, McHenry disclosed the user access frequencies are reported and stored in the meta-data/rules base database (McHenry: par 0031), please note, the meta/data/rules associate the cache management attributes with corresponding content groups (McHenry:

par0013), each group is a category; therefore, the user access frequencies are clearly associated with respective content group (i.e. category).

Applicant's Arguments:

Furthermore, the Final Office Action alleged that content on McHenry's "enterprise network edge servers" (McHenry, paragraph [0025]) and "origin server systems" (id.) correspond to the claimed "distributed contents" and "remaining contents that have not been distributed," respectively. See Final Office Action, p. 3. Even accepting this allegation, solely for the sake of argument, McHenry neither teaches nor suggests making contents at the "origin server systems" available for distribution if they are associated with the same category as certain contents at the "enterprise network edge servers," where those contents at the "enterprise network edge servers" have an interest value exceeding an interest threshold. That is, McHenry fails to teach or suggest "making at least one of the identified contents associated with said identified category available for distribution at surrogate servers," as recited by claim 18. (Applicant's response filed on 05/10/2011, page 11).

Examiner's Response:

At the onset, the Examiner mapped "EDGE SERVER" to "surrogate servers" and clearly noted it's the "content at the "ORIGIN SERVER"" being corresponded to "remaining contents that are not available at the surrogate

server" in the rejection; further, McHenry clearly noted the system being built on top of a system with content origin server and reverse proxy caches and that "relevant user content requests from the Internet at large are served from the reverse proxy cache with the origin servers acting as a content source only for requests for uncached content" (McHenry: par 0007), which clearly indicates the origin server contains the remaining content that have not been distributed (i.e. not at the edge server); Further more, McHenry clearly disclosed making contents at the "origin server systems" available for distribution if they are associated with the same category as certain contents at the "enterprise network edge servers," --- McHenry disclosed "a plurality of content groups " are defined to present "respective content sub-sets", and further these content groups are associated with cache management attributes by way of cache control rules for distributing content (McHenry: par 0013), and content distribution is "tailored to support the specific content and quality of service requirements of the clients directly served by the multi-proxy cache" (McHenry: par 0016); and as noted above, user interest value such as user access frequencies are used to generate/modify the rules; Further more, the same concept of caching / pre-fetching content based on category is also clearly taught by Ben-Shaul (par 0026, 0062, 0063)

Applicant's Arguments:

Conceding that McHenry "does not explicitly disclose receiving an input of an interest threshold to be used for identifying content group/category," the Final Office Action cited Menon to remedy the deficiency. See Final Office Action, pp. 4-5. Menon discloses that "if the frequency of access of a particular content goes over a preset threshold, the system can trigger an operation that eventually results in the 'push' of the content from an origin server ... to the rest of the edge servers." Menon, paragraph [0076]. The Final Office Action apparently interpreted Menon's "frequency of access" and "preset threshold" as equivalent to the claimed "interest value" and "interest threshold," respectively. See Final Office Action, pp. 4-5. This is incorrect; and Menon does not cure the above-discussed deficiencies of MeHenry.

Menon's "frequency of access" is not determined "for each category based on statistical data ... associated with the respective category," as recited by amended claim 18. Indeed, according to Menon, the "frequency of access" is associated with "a particular content" (Menon, paragraph [0076]), rather than "each category," as recited by claim 18. Accordingly, since Menon only determines "if the frequency of access of a particular content goes over a preset threshold," it cannot identify "at least one category, from said predefined categories, when the distributed contents associated with the category have an interest value that exceeds the interest threshold," as recited by claim 18.

Furthermore, Menon discloses that "if the frequency of access of a particular content goes over a preset threshold" (see Menon, paragraph [0076]),

this same content will be pushed from the origin server, rather than "making at least one of the identified contents [that have not been distributed] associated with said identified category available for distribution at surrogate servers," as recited by claim 18. Indeed, like McHenry, Menon is silent regarding making undistributed contents available for distribution if they are associated with the same category as certain distributed contents that have an interest value exceeding an interest threshold. (Applicant's response filed on 05/10/2011, page 11-12).

Examiner's Response:

Menon disclosed using of preset threshold over frequency of access to determine if particular content should be cached at surrogate server, it would have been obvious to one of ordinary skill in the art at the time of the invention, to applied the same concept of threshold for the content groups (categories) in the system of McHenry, i.e., the same concept of using threshold may be readily used in determining interest for the content groups in the system of McHenry; because McHenry clearly disclosed distribution of content groups are tailored based on specific content requirements and changing user demands (McHenry: par 0013, 0016, 0018), using of threshold on attributes such as access frequency is just an implementation for determine the content requirement and use demand; Use of known technique to improve similar system in the same way provided in the teachings of prior art is part of the ordinary capabilities of one of ordinary skill in the art. *KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007).*

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.   Claims 18-20 and 24-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent **claim 18** recites a method for controlling distribution of media contents over a network, however, based upon consideration of all of the relevant factors with respect to the claim as a whole, claim 18 held to claim an abstract idea, and is/are therefore rejected as ineligible subject matter under 35 U.S.C. 101. The rationale for this finding is explained below:

The steps of the method are not tied to a particular machine or apparatus, and do not particularly transform a particular article to a different state or thing. The claim recites a method to identifying and associate media contents for distribution, which one could do without transformation or a machine. The steps could be done in paper in a computer room as making available step could be just be putting in paper a stack of stuff to add.

Further, dependent **claims 19, 20 and 24-28** when analyzed as a whole are held to be patent ineligible under 35 U.S.C. 101 because the additional recited limitations fail to establish that the claims are not directed to an abstract idea, as detailed below:

Claim 19 recites additional steps involving the use of data mining or artificial intelligence mechanisms, the use of data mining can be done without transformation or

a machine; Claim 20 recites additional steps involves a mechanism selected from

neural networks, fuzzy logic and decision trees, the use of decision trees can be done

without transformation or a machine; Claims 24-28 recite addition steps of storing and

extracting content from database (early definitions of database include a file cabinet or

organization of data), forwarding, accessing and modifying class template, which one

could do without transformation or a machine.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 18, 24-28 and 34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over **US PG-PUB No. 2003/0115421 A1** to **McHenry et al.** (Cited in

previous office action, hereinafter **McHenry**) in view of **US PG-PUB No. 2002/0152318**

A1 to **Menon et al.** (Cited in previous office action, hereinafter **Menon**), **US PG-PUB**

No. 2002/0010798 A1 to **Ben-Shaul et al.** (Cited in previous office action, hereinafter

Ben-Shaul) and **US PG-PUB No. 2003/0028564 A1** to **Sanfilippo** (Cited in previous

office action, hereinafter **Sanfilippo**).

As per **claim 18**, McHenry disclosed a method for controlling distribution of

media contents over a network (**McHenry**: Abstract, network edge cache

management system), wherein said contents comprise distributed contents

(**McHenry**: Fig. 1, ref 22, 24, content stored in "EDGE SERVER" (multi-proxy caches) are distributed content) and remaining contents that have not been distributed (**McHenry**: Fig. 1, content at the "ORIGIN SERVER", par 0007, "uncached content" corresponds to the remaining contents), comprising the steps of:

identifying contents eligible for distribution from the remaining contents (**McHenry**: paragraph [0013], "content selection server" identifies content in the bounded content domain);

defining a set of categories (**McHenry**: paragraph [0013], "predefined set of domain content identifiers" each corresponds to a category; also on page 6, claim 1, "selecting" and "grouping");

identifying for each category at least a reference content (**McHenry**: paragraph [0013], also claim 1 text, the meta-content description for each content group is the equivalent of a reference content);

associating said distributed content and said identified contents with said predefined categories (**McHenry**: paragraph [0013], "associate respective sets of predetermined cache management attributes with the plurality of content groups", and further on page 6, claim 15, the ache management attributes "designate corresponding content of said bounded domain for forward or reverse proxy caching by said plurality of network edge cache servers");

determining an interest value for each category based on statistical data indicative of user interest in the distributed content associated with the respective

category (**McHenry**: par 0031, log files and information such as "content and user access frequencies" (i.e. interest value) are used as basis for generating content policy rule bases; and par 0042, content policy rules are used for determining cache partitions (i.e. allocation of different content groups / categories);

identifying at least one category, from said predefined categories, when the distributed contents associated with the category have an interest value that exceeds a threshold (**McHenry**: paragraph [0031], "user access frequencies" corresponds to user interest, as one of ordinary skill in the art would recognize, some type of threshold has to be used for taking into account of the user access frequencies/ interest); and

making at least one of the identified contents associated with said identified category available for distribution at surrogate servers (**McHenry**: paragraph [0013], cache control rule bases are distributed to the edge servers; these are replacement policies, i.e., they identify the new content from the origin server to the edge servers' cache);

McHenry does not explicitly disclose receiving an input of an interest threshold to be used for identifying content group/category, in an analogous art in network content distribution, **Menon** disclosed a method and system where an input of an interest threshold is received and used for identifying content to be distributed/cached at edge server (**Menon**: paragraph [0076], "if the frequency of access of a particular content goes over a preset threshold, the system can

trigger an operation that eventually results in the "push" of the content from an

origin server (or any other server) to the rest of the edge servers (or to some sub-

set of the rest of the edge servers)", the input of threshold was received during

the "preset"); it would have been obvious to one of ordinary skill in the art at the

time of the invention, to modify the system of **McHenry** to incorporate the

concept of using preset threshold of user interest / access frequency in

identifying content to be provided to edge server, to applied the same concept of

threshold for the content groups (categories) in the system of McHenry, i.e., to

use a preset threshold of user access frequency in identifying content group to

be distributed to edge servers, the motivation being for increased network system

efficiency; because McHenry clearly disclosed distribution of content groups are

tailored based on specific content requirements and changing user demands

(McHenry: par 0013, 0016, 0018), using of threshold on attributes such as

access frequency is just an implementation for determine the content

requirement and use demand;

McHenry-Menon does not explicitly disclose associating distributed contents

and said identified contents based on semantics affinity with said reference

content, in an analogous art in network content distribution, **Ben-Shaul** disclosed

a method and system that associates distributed contents and identified contents

based on semantics affinity (**Ben-Shaul**: paragraph [0063], the example of when

user request for a cook book, the server return a list of cook books, and

information regarding local food and cookware stores, indicates that contents are

associated with predefined categories based on semantics affinity; and paragraph [0072], second version of the content derived from the origin web server); one ordinary skill in the art would recognize that such association method can be equally used for categorizing content at the original server; it would have been obvious to one of ordinary skill in the art at the time of the convention, to modify the system of **McHenry-Menon** to further incorporate the association contents based on semantics affinity from **Ben-Shaul**, the motivation being for increased system efficiency and ease of use, because using semantics affinity is just one way of categorization;

Although **McHenry-Menon-Ben-Shaul** does not explicitly disclose using a reference content to categorize addition content based on semantics distance, in an analogous art in network communications, **Sanfilippo** disclosed a method and system where additional content are categorized based on semantics affinity with reference content, where the semantics affinity is calculated as the distance between the additional content and the reference content (**Sanfilippo**: page 10, claim 27 text); it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry-Menon-Ben-Shaul** to further incorporate the categorizing additional content based on calculation of semantic distance from **Sanfilippo**, the motivation being for increased system efficiency and ease of use, because how to categorize content is just a matter of implementation choice.

As per **claim 24**, **McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method according to claim 23; although **McHenry-Menon-Ben-Shaul-Sanfilippo** does not explicitly disclose using two separate databases for storing classification information, **Ben-Shaul** disclosed using two separate databases for storing content provided (**Ben-Shaul**: paragraph [0072], origin web server storage and edge server storage); it would have been obvious to one of ordinary skill in the art, to also apply the separated databases concept for storing classification information, the motivation being for increased data access efficiency.

As per **claim 25**, **McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method according to claim 24, wherein said step of identifying at least one category comprises the steps of:

defining the interest threshold to be representative at least of a frequency of user requests for a given distributed content (**McHenry**: paragraph [0031], "user access frequencies"; and **Menon**: paragraph [0076]); and

extracting from said first database category information comprising at least one predefined category associated with said given distributed content when said interest threshold is exceeded (**McHenry**: paragraph [0031], "user access frequencies" corresponds to user interest, and **Menon**: paragraph [0076]).

As per **claim 26**, **McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method according to claim 24, wherein said step of making at least one of the identified

contents associated with said identified category available for distribution at said
surrogate servers comprises the step of:

extracting from said second database contents information related to said
at least one identified content (**Ben-Shaul**: paragraph [0063], extract information
regarding local food and cookware stores when a cook book is requested).

As per **claim 27**, **McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method
according to claim 24 comprising the steps of:

identifying identified information comprising at least usage information
provided by said surrogate servers ((**McHenry**: paragraph [0031], "user access
frequencies"; and **Ben-Shaul**: paragraph [0054], statistics collection and
reporting);

matching said additional information with said category information
provided by said first database (**Ben-Shaul**: paragraph [0063], finding related
information, i.e., matching content requested with category information; same
matching method can be used for content frequently requested as well);

generating at least one class template comprising said matched
information (**Ben-Shaul**: paragraph [0070], distribution policies change
dynamically based on characteristic of differentiated content; the discloses
identifies "class template" as "content distribution events/actions based on
triggered policies for distributing the contents or for modifying the distribution
policies);

adding to said class template said contents information provided by said

second database (**Ben-Shaul**: paragraph [0069] [0070], policies (and new

policies) are stored on origin site, a database has to be inherently included for

the storage); and

forwarding said at least one modified class template to a distribution

system (**Ben-Shaul**: paragraph [0069], the edge servers get updates on their

policies from the origin site, i.e., the new policies are forwarded to the edge

servers from the origin site).

As per **claim 28, McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method

according to claim 27 wherein said step of adding to said class template said

contents information provided by said second database comprises the steps of:

accessing a class template repository (**Ben-Shaul**: paragraph [0069]

[0070], policies (i.e. classes) (and new policies) are stored on origin site, a

database has to be inherently included for the storage, the policy repository has

to be accessed for the change to be recorded); and

modifying said class template according to said content information (**Ben-

Shaul**: paragraph [0069] [0070], policies (and new policies) are stored on origin

site, a database has to be inherently included for the storage).

As per **claim 34, McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed a non-

transitory computer readable medium encoded with a computer program product

loadable into a memory of at least one computer, the computer program product

comprising software code portions for performing the method of claim 18 (the

rationale of rejection and reasons of obviousness have been noted in the

rejection of claim 1 above and applicable herein).

10.   Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over **McHenry** in view of **Menon**, **Ben-Shaul** and **Sanfilippo** as applied to claim 18

above, and further in view of **US Pat. No. 6,829,613 B1** to **Liddy** (Cited in previous

office action, hereinafter **Liddy**).

As per **claim 19, McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method

according to claim 18; although **McHenry-Menon-Ben-Shaul-Sanfilippo** does

not explicitly disclose the step of calculating semantics affinity comprising step of

involving the use of data mining or artificial intelligence mechanisms, in an

analogous art in electronic content providing, **Liddy** disclosed a method and

system that calculating semantics affinity involves the use of artificial intelligence

mechanisms (**Liddy**: col. 13, line 61 - col. 14, line 7, "decision tree" is an artificial

intelligence mechanism), it would have been obvious to one of ordinary skill in

the art at the time of the invention, to modify the system of **McHenry-Menon-**

Ben-Shaul-Sanfilippo to further incorporate the using of artificial intelligence

mechanisms for calculating semantics affinity from **Liddy**, the motivation being

for increase ease of use, because what method to use for calculating semantics

affinity is just a matter of implementation choice.

As per **claim 20**, **McHenry-Menon-Ben-Shaul-Sanfilippo-Liddy** disclosed the
method according to claim 19, wherein said mechanisms comprise at least a
mechanism selected from neural networks, fuzzy logic and decision trees (**Liddy**:
col. 13, line 61 - col. 14, line 7, decision tree).

11.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over
McHenry in view of **Menon**, **Ben-Shaul** and **Sanfilippo** as applied to claim 18 above,
and further in view of **US PG-PUB No. 2002/0062300 A1** to **Asadov et al.** (Cited in
previous office action, hereinafter **Asadov**).

As per **claim 21**, **McHenry-Menon-Ben-Shaul-Sanfilippo** disclosed the method
according to claim 18; although **McHenry-Menon-Ben-Shaul-Sanfilippo** does
not explicitly disclose using of searching engines in the step of identifying a
reference content, in an analogous art in electronic content providing, **Asadov**
disclosed a method and system where search engines are used for identifying
document by content (**Asadov**: paragraph [0020], [0050], search agents are
used for identifying document by semantics); it would have been obvious to one
of ordinary skill in the art at the time of the invention, to modify the system of
McHenry-Menon-Ben-Shaul-Sanfilippo to further incorporate the search
agents (search engines) from **Asadov**, the motivation being for improved system
efficiency.

12.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over
McHenry in view of **Menon**, **Ben-Shaul**, **Sanfilippo** and **Asadov** as applied to claims
18 and 21 above, and further in view of **US PG-PUB No. 2002/0188681 A1** to **Gruen et
al.** (Cited in previous office action, hereinafter **Gruen**).

As per **claim 22**, **McHenry-Menon-Ben-Shaul-Sanfilippo-Asadov** disclosed the
method according to claim 18, wherein said step of identifying for each category
at least a reference content comprises the steps of:

identifying a set of reference contents by using search engines (**Asadov**:
paragraph [0020], [0050], search agents are used for identifying document by
semantics; see motivation in the rejection of claim 21 above);

Although **McHenry-Menon-Ben-Shaul-Sanfilippo-Asadov** does not explicitly
disclose calculating a central reference content, in a analogous art in providing
electronic content, **Gruen** disclosed a method and system where a centroid
document (i.e. central reference content) is calculated for a set of documents
(**Gruen**: paragraph [0039], computing a centroid document for a cluster of
documents); it would have been obvious to one of ordinary skill in the art at the
time of the invention, to modify the system of **McHenry-Menon-Ben-Shaul-
Sanfilippo-Asadov** to further incorporate the calculating central reference
content from **Gruen**, the motivation being for increased system efficiency and
accuracy for categorizing documents.

Conclusion

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINGLAN EDWARDS whose telephone number is (571)270-5440. The examiner can normally be reached on 6:00AM-3:30PM EST Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ashokkumar B. Patel can be reached on (571) 272-3972. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.   Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Linglan Edwards/
Examiner, Art Unit 2491